Continual Technological Evolution & Changing Battle Space

By Adam Clevenger & Dave Summer, **NETWARCOM FORCEnet Staff** Illustrations by Michael J. Morris

"Our largest future force multiplier is FORCEnet. It must be scalable and relevant and cover the full spectrum across the entire range of missions."

- ADM Mike Mullen, CNO

"FORCEnet is all about Command and Control

- across the Naval Enterprise - from warfighting to business practices. It's the way we do business in the 21st Century.

- VADM James D. McArthur Jr., Commander,

- NETWARCOM -

"FORCEnet is about Command and Control throughout the Naval Enterprise. It focuses on the commander, how he can better communicate his intent and mission-type orders, and the initiative of decision-makers throughout the battlespace."

- LGEN James N. Mathis, Commanding General, -

- MCDCC, Quantico, VA -



Continued from page 15

ach of these remarks describe FORCEnet but each places different emphasis ranging from how FORCEnet will influence the entire Navy and Marine Corps, including the support elements ashore, to how it will shape and influence command and control, and all missions.

FORCEnet will influence the entire Naval Enterprise however; the primary driver behind FORCEnet is supporting the warfighters.

Naval leadership, quoted earlier, describes FORCEnet from their perspective depending on how they build, buy, or use FORCEnet. Sailors and Marines down the chain of command have an even greater range of definitions depending on the individual's background, command, position, and rank. Some may not even recognize the name.

The purpose of this article is to discuss what FORCEnet capabilities are and how these capabilities are being applied today.

In follow-on articles we will list and explain in detail, the fifteen FORCEnet capabilities as well as other areas working with FORCEnet. However, it is important to understand several guiding principles in the FORCEnet's Functional Concept that further define the essence of FORCEnet. These guiding principles are...

1. FORCEnet is ultimately about transforming naval

operations. It is intended to serve as the "sparkplug" for naval transformation,

- **2.** To an extent never before possible, FORCEnet will integrate people, weapons systems, sensors and platforms and networks into a single command and control system.
- **3.** Realization of FORCEnet will require a balanced approach that integrates people, training, doctrine and systems sometimes described as doctrinal, organizational, training, materiel, leadership & education, personnel, and facilities (DOTMLPF).
- **4.** FORCEnet provides a common direction for the many and diverse efforts that contribute to building the naval command and control capabilities of the future.
- **5.** FORCEnet cannot be engineered. The development must be adaptive and iterative i.e. "build a little, test a little" with operators and users working with the engineers and developers.
- **6.** The real power in FORCEnet is in connecting to the "tactical edge"—extending the tactical picture, weapons, sensors and C2 to the individual platform, Sailor and Marine, no matter where they are.

FORCEnet's future is detailed and challenging, requiring continuous experimentation, analysis, assessments and systems engineering. The implications of FORCEnet for the Navy and Marine Corps are dramatic. Many technological improvements may be direct and immediately discernable. Other implications, such as personnel management or leader development, are less apparent, but every bit as important.

Although technology solutions are often the most obvious – and FORCEnet clearly depends on advanced technologies – it should not be assumed that most of these capabilities will be built primarily through systems and technology. FORCEnet must take an integrated approach, which will allow developers to make tradeoffs among different options. All possible means to achieve a capability are related and dependent.

For example, a new technology or system may require training, organizational, doctrinal and manpower changes "tangibles." Conversely, a new technology may not make much difference if existing doctrine and organizations don't adapt which may result in marginal improvements and may even prove counterproductive.

Technologies must co-evolve with the other elements of force development "intangibles."

CAPT Rick Simon is
NETWARCOM's FORCEnet
director who directs a staff
of seven that work across the
command and Navy to help
implement FORCEnet. For
more information visit the Navy's
FORCEnet program Web site at
http://forcenet.navy.mil/. ©8